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Claims

1. (original) A method or diagnosis of a sensor in a motor vehicle having an internal combustion engine, wherein during operation of the motor vehicle, an output signal of the sensor is monitored for whether a maximum value of the output signal undershoots a first threshold value and/or a minimum value of the output signal overshoots a second threshold value, and in that case a signal is forwarded to a controller that signals to the controller that the sensor, upon restarting of the motor vehicle, might be furnishing incorrect data.

2. (original) The method as recited in claim 1, characterized in that the first threshold value is equal to the second threshold value.

3. (original) The method as recited in claim 1, characterized in that in the event of undershooting or overshooting of the threshold values, the output signals of the sensor upon restarting of the motor vehicle are initially not used for the control and/or regulation of the motor vehicle.

4. (original) The method as recited in claim 3, characterized in that the sensor is not used again for the control and/or regulation of the motor vehicle until calibration of the sensor has been done.

5. (original) The method as recited in claim 4, characterized in that the calibration is done by learning minimum and maximum output values of the sensor.

6. (original) The method as recited in claim 1, characterized in that the signal in the controller is stored in a nonvolatile memory so that the signal will be

directly available upon restarting of the engine.

7. (original) The method as recited in claim 1, characterized in that the sensor is a phase sensor on a camshaft of the engine.

8. (currently amended) The method as recited in ~~claims 3 and 7~~ claim 3, characterized in that starting of the engine in emergency operation is done without using the phase sensor.

9. (currently amended) The method as recited in claim 1 ~~or 2~~, characterized in that the threshold values are stored in a permanent memory of the sensor.

10. (original) The method as recited in claim 9, that by means of a calibration of the sensor, the threshold values are adapted.

11. (original) The method as recited in claim 1, characterized in that the forwarding of the signal is done in encoded form.

12. (original) A sensor having means for performing the method of claim 1.